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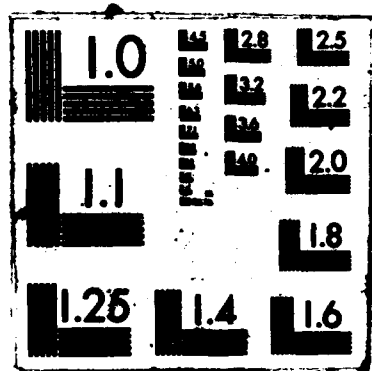
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STUDENT REPORT

AN ANALYSIS OF THE SOVIET
RESPONSE TO THE STRATEGIC DEFENSE
INITIATIVE (SDI)

MAJOR DAVID E MORGAN 87-1900
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DEFENSE INITIATIVE

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requirements for graduation.

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PREFACE

A great deal of information is published about President Reagan's Strategic Defense Initiative (SDI). Most of that material has focused on the technical feasibility and strategic stability issues surrounding SDI. As a result, there is a limited amount of information which discusses the Soviet response to SDI. This research project looks at the Soviet response to SDI and tries to explain the motivation behind that response. It would be too easy to dismiss the Soviet statements about SDI as mere communist propaganda. Because of its potential impact to strategic stability, miscalculating or misunderstanding the Soviet's response to SDI could have significant consequences. Therefore, understanding the Soviet response to SDI is important. Applying that understanding when deciding the fate of the SDI program could prevent miscalculating subsequent Soviet responses.

This research project is intended to broaden the reader's perspective by highlighting some factors that may influence the Soviet response. With a broader perspective, a better understanding of the present and future Soviet responses to SDI can be reached.

The author wishes to give a very special thanks to his family. To his wife Chris, for providing the support and encouragement when things got tough. To his daughters Kristin and Katie, and his newborn son Michael, for sacrificing their time with dad.

The author is grateful to his advisor, Lt Col Dieter Krause, whose guidance and assistance are reflected by the quality of this research project. Without his assistance, the author could not have completed this project.

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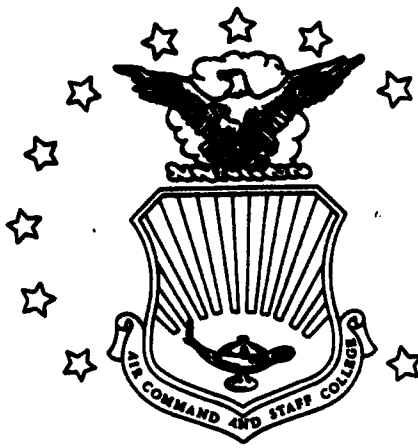
ABOUT THE AUTHOR

Major David E. Morgan graduated from the Akron University in 1974 with a Bachelor of Science Degree in Mechanical Engineering and was commissioned through the AFROTC program. He graduated from pilot training in 1976 and was assigned to the 7th Bomb Wing to fly B-52D's. During his five and one-half years on station, he progressed through various squadron and wing positions. He is a senior command pilot with over 1600 hours in the B-52D. In 1983, Major Morgan earned a master's degree in Systems Management and was a distinguished graduate at the Air Force Institute of Technology's School of Systems and Logistics. He remained at Wright-Patterson AFB to work in the B-1B Program Office's Projects Directorate as a special project manager for three years. During this time Maj Morgan worked on numerous projects. In his last project, Maj Morgan was the interface manager for all software support systems for the B-1B aircraft. In this job, he worked with over sixty other managers and engineers from Hqtrs SAC, Air Force Weapons Lab, other ASD program offices, and government contractors.

Major Morgan's professional military education includes completion of SOS in residence as a distinguished graduate, and completion of the Air Command and Staff College seminar program.

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EXECUTIVE SUMMARY

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REPORT NUMBER

87-1800

AUTHOR(S)

MAJOR DAVID E. MORGAN, USAF

TITLE

AN ANALYSIS OF THE SOVIET RESPONSE TO PRESIDENT
REAGAN'S STRATEGIC DEFENSE INITIATIVE (SDI)

I. Problem: Most discussions concerning SDI focus on issues such as technical feasibility and strategic stability. There is limited discussion explaining why the Soviets have been so emphatic and persistent in their statements about SDI. Understanding the reasons behind Soviet behavior is important, because a miscalculation of Soviet intentions, when the US national leadership decides the fate of the SDI program, could have significant consequences.

II. Objectives: To determine the Soviet response to SDI, and to determine the reasons behind the Soviet Union's response to the SDI program, and to better understand what influences their response.

III. Discussion of Analysis: This research assumes the Soviets believe an effective war-fighting capability is the basis for national security. The reader must understand there are several limitations to this research. The research is based entirely upon secondary sources of information. Further, the Soviet Union is a closed society with absolute control over what material is released. Finally, all material must be translated from Russian. Numerous quotes are provided to illustrate the emotion and vigor with which the Soviets attack the SDI program. The discussions about Soviet military thought provide an understanding of how the Soviets think about war and how they plan to win it. The

CONTINUED

literature was reviewed to gather opinions from various scholars concerning the Soviet response to SDI.

IV. Findings: Soviet statements against SDI are consistently strong and energetic since SDI was announced in 1983. Soviet attacks on SDI can be grouped into five themes: SDI is an offensive weapon, SDI violates the ABM Treaty of 1972, SDI accelerates the arms race, SDI must be discussed during arms control negotiations, and the Soviet Union will determine Soviet strategy.

Most scholars agree the Soviets are genuinely concerned about the deployment of SDI. There are many opinions concerning how the Soviets will respond to SDI. Some authors believe the Soviets will seek to negotiate SDI away. While other authors believe the Soviets will build their own SDI-like system.

There are military, political, and economic factors that influence the Soviet response to SDI. From a military perspective, the Soviets fear SDI will neutralize their primary source of military and political power, the ICBM forces. Further, Soviet strategic defense and civil defense would be strained because more US ICBM's would survive an attack and could be launched in a retaliatory strike. More important from a Soviet perspective, they believe SDI will be used to support a nuclear first strike to destroy the Soviet Union. Politically, the Soviets are exploiting SDI as an arms control issue to enhance their image as a peace-loving nation and also to help undermine the unity of the NATO alliance. Economically, the Soviets want to avoid a costly arms race with the US and, instead, direct their efforts toward economic recovery. Their economic concerns may be the motivation for the tremendous political pressure the Soviets are using to stop SDI.

V. Conclusions: The Soviets are genuinely concerned about SDI and its future deployment. However, the Soviets don't want to engage in an arms race with the US because of their weak economy and their desire to improve it. As a result, the Soviets will continue using primarily political means to attack SDI. The Soviets will maintain their current level of efforts on strategic defense programs, and no additional R&D efforts will be started until SDI evolves into a definite system.

Chapter 1

INTRODUCTION

President Reagan announced the Strategic Defense Initiative (SDI) in his speech of March 23, 1983. Since his speech, the SDI program has generated substantial discussions. Topics discussed include: SDI's technical feasibility, fiscal constraints, morality of nuclear weapons, SDI's impact on our allies, and SDI's impact on strategic stability. President Reagan's intent was to shift the emphasis from mutual assured destruction to strategic defense. Specifically, he stated:

What if free people could live secure in the knowledge that their security did not rest upon the threat of instant retaliation to deter a Soviet attack, that we could intercept and destroy strategic ballistic missiles before they reached our soil or that of our allies?...I believe there is a way....It is that we embark on a program to counter the awesome Soviet missile threat with measures that are defensive....I call upon the scientific community in our country, those who gave us nuclear weapons, to turn their great talents now to the cause of mankind and world peace, to give us the means of rendering these nuclear weapons impotent and obsolete. (5:1)

However, the Soviets quickly condemned the Strategic Defense Initiative. In fact, only four days after President Reagan's speech the late Soviet leader Yuri Andropov claimed:

In fact the strategic offensive forces of the United States will continue to be developed and upgraded at full tilt and along a quite definite line at that, namely that of acquiring a first strike nuclear capability. Under these conditions, the intention to acquire the capability of destroying the strategic systems of the other side with the aid of BMD, that is, of rendering the other side incapable of dealing a retaliatory strike, is a bid to disarm the Soviet Union in the face of the American nuclear threat. (20:96)

Not surprisingly, when viewing the same program, the Soviets have a different interpretation of SDI's objectives. The Soviet interpretation and subsequent response to SDI's objectives is a very important issue to the SDI program. James Fletcher, Chairman of the Pentagon's SDI feasibility study, stated SDI's cost

effectiveness will be based upon how the Soviets respond to SDI. (20:85) This same study noted that the Soviet response was an uncertainty associated with determining what technology or combination would be chosen by the SDI. (5:107) David Hollaway, a defense analyst, believes the Soviet response to SDI needs to be considered when answering the tough questions about SDI. (15:257) David Rivkin, a defense analyst, states the Soviet response to SDI will influence the program's future as much as its technical feasibility. (20:85) The purpose of this research project is to take a closer look at the Soviet Union's response to SDI and determine some of the reasons for their response.

STATEMENT OF THE PROBLEM

What has been the Soviet Union's response to President Reagan's Strategic Defense Initiative, and why have the Soviet's responded in such a manner?

METHODOLOGY

To answer the first part of the problem statement, a sample of the official Soviet statements is provided in Chapter 2. These quotations provide the reader examples of the Soviet statements concerning SDI. As background information, Chapter 3 contains information about Soviet military thought and the evolution of Soviet Ballistic Missile Defense (BMD) policy. A review of the scholarly opinion about the Soviet response to SDI is presented in Chapter 4. These opinions are used as a starting point for the author's analysis of the Soviet response. This analysis and the author's conclusions are presented in Chapter 5.

ASSUMPTIONS, LIMITATIONS, AND SCOPE

There are several important assumptions and limitations the reader must be aware of while reading this research project.

Assumptions

As with any topic, there are several interpretations or perceptions of Soviet military thought. This analysis views Soviet military thought as having a war-fighting perspective. Schulyer Foerster provides an excellent bibliographical essay on Soviet defense policy that provides the reader a sampling of various schools of thought concerning Soviet military thought. (8:112)

Limitations

This project is based upon secondary sources of information. Two factors further influence the quality of the secondary sources. First, the Soviet Union as a closed society controls the availability and content of information on any topic. Second, the information sources are dependent upon accurate translations and interpretations of the Russian language. (28:6) As a result of these factors, the actual intent of the Soviet leadership may never be known definitively, but can only be speculated upon.

Analyzing Soviet responses this early may provide limited value because it's so speculative and dependent upon SDI decisions that are years away. However, some insight can be gained as to how the Soviet's really perceive SDI and what future action or response can be expected from the Soviet leadership. These responses may influence future decisions of the US national leadership concerning SDI deployment.

Scope

The discussion on Soviet military thought was focused at the strategic nuclear conflict level, since SDI primarily impacts this level of conflict.

Discussions about Soviet Ballistic Missile Defense (BMD) are general and are only intended to provide the reader with an overview of the evolution of Soviet BMD policy. A more detailed discussion of this evolution and current Soviet BMD efforts can be found in Gorbachev's Star Wars (27:--) and Soviet Strategic Defense Programs (24:--) respectively.

All information concerning potential Soviet countermeasures were taken from unclassified sources.

Chapter 2

SOVIET STATEMENTS ON SDI

The Soviet campaign against SDI is extensive and comes from a wide spectrum of sources. These sources include the highest political leadership, including Gorbachev and the late Andropov, as well as senior military officers, diplomats, and Soviet academicians. The Soviets achieved several firsts in their rhetoric about SDI. A group of Soviet scientists produced a report titled, "The Strategic and International Political Consequences of the Creation of a Space Based Anti-Missile System Using Directed Energy Weapons." In 1985, this report was published in two separate US periodicals: DS2003+, and Survival. The report concluded BMD systems make the deterrent relationship between the US and USSR less stable. (15:267) According to Holloway, this was the first time a detailed technical and strategic assessment of new military technology was published in the Soviet Union. However, Holloway notes that much of the technical analysis was based on similar discussions conducted in the United States. (15:267) Another first was the pamphlet called Star Wars: Delusions and Dangers, which describes the impact of SDI on world peace. This pamphlet was published in Moscow and distributed worldwide. For all the diverse sources, there is a remarkable similarity in the statements. (14:11) Several themes summarize the content of the Soviet position. First, the Soviets vehemently believe that SDI is not a defensive system but, instead, enhances a US first-strike capability. As a result of this enhancement, the Soviets view SDI as a destabilizing influence on the balance of power between the superpowers. As a second theme, the Soviets state that SDI violates the 1972 ABM Treaty. Third, the Soviets claim SDI fuels the arms race and is therefore again a destabilizing program. Next, the Soviets want to include SDI as part of the arms control negotiations. Finally, the Soviets reject the idea of moving from a strategic-offensive force structure to a strategic-defensive force structure. This chapter will present some quotations that illustrate each of the five themes.

SDI IS AN OFFENSIVE WEAPON

The first theme concerns the Soviet perception of what purpose SDI serves the United States. It is in this area that the Soviets have responded with strong emotion. The Soviets believe SDI is destabilizing to the balance of power and claim it will increase

the likelihood of war. They view SDI as a means of enhancing the offensive capabilities of the United States by providing a protective shield against a Soviet retaliatory strike. (17:57; 19:277). In short, the Soviets see the SDI program as an effort designed to provide a nuclear first-strike capability against them. (26:3) Yuri Andropov's statement made four days after President Reagan's SDI speech of 23 March 1983 clearly accuses the US of developing a first strike capability. This theme was again stated in the Soviet published booklet, Star Wars: Delusions and Dangers:

It is easy to see that if the "Star Wars" plan is carried out, Pentagon strategists, who rely on impunity, may be tempted, behind cover of the space anti-missile shield, to chance using nuclear and space weapons for a strike against the USSR and its allies. In this set-up, the purpose of the space shield is to frustrate the Soviet Union's retaliatory strike, to "finish off" at launch those of its missiles that survive the nuclear first strike of the US. (9:30)

Similarly, a Feb 1985 Pravda editorial asked this question, "If the said 'initiative' is put forward in order to make offensive nuclear weapons unnecessary, why is it accompanied with an unprecedented building of the American strategic nuclear arsenal?" (20:96)

In his monograph titled Military-Strategic Parity and US Policy, Aleksei Arbatov hints that a nation developing a BMD against a massive nuclear strike might think to use it to defend against a retaliatory strike. (27:98) The concept of destabilization is also mentioned in terms of Western Europe:

The main thing is, however--and the people in the NATO countries cannot fail to see this-- that the anti-missile shield will not enhance their security. On the contrary...Western Europe will become still more vulnerable militarily. (9:38)

SDI VIOLATES THE 1972 ABM TREATY

Many of the attacks on SDI have centered around Article 1 and Article 5 of the ABM Treaty. Briefly, Article 1 states that both parties agree not to develop a territorial ABM system and Article 5 concerns the development, testing, and deployment of an ABM system or component. According to the US interpretation of the ABM Treaty, SDI doesn't violate any of the Treaty's Articles. However, Marshal Sergey Akhromeyev, chief of staff and first deputy defense minister, wrote in Pravda on 19 Oct 1985, "...Such 'interpretations' of the ABM treaty, to put it mildly, are deliberate deceit. They contradict reality. Article 5 of the

treaty absolutely unambiguously bans the development, testing and deployment of ABM systems or components of space...." (25:4)
Defense Minister Sokolov wrote in Pravda on 6 Nov 1985:

....But this is precisely a de facto undermining of the ABM Treaty. First, because work is being done on the creation of an ABM defense system for the country's entire territory and furthermore, for the territory of US allies, which is banned by Article 1 of the treaty. Second, because it is a question of developing a space-based system, which is banned by Article 5. (25:6)

SDI AND THE ARMS RACE

According to the Soviets, the arms race would be fueled from two perspectives. First, more offensive weapons would be built as a countermeasure to the defenses provided by SDI. The Soviets claim, "The development of space strike weapons, if they are not banned, may grow into a strongly destabilizing factor, a catalyst of what would in effect be an uncontrollable arms race." (9:53) Secondly, the Soviet's efforts to generate defensive weapons that emulate SDI would increase. They have warned the US, "If you create space strike weapons we shall do the same. We shall not be found wanting...SDI is not as innocuous a program as depicted. It is a military program, a program for the militarization of space." (25:10)

SDI AND ARMS CONTROL NEGOTIATIONS

Recently there have been attempts to tie SDI to future arms control negotiations. The Soviets have stated, "Nowadays, the problem of limiting and reducing nuclear arms cannot be resolved in isolation from the prohibition of space strike weapons." (9:54) Similarly, in January 1985, Gromyko reiterated the requirement to tie space negotiations with arms control negotiations. "...if there were no progress in questions of space then it would be superfluous to speak about the possibility of reducing strategic arms." (15:274)

SELF-DETERMINATION OF SOVIET STRATEGY

Soviet statements on strategic defense clearly reveal that Moscow does not see a transition to strategic defense being undertaken without operating at what the Soviets see as unacceptable risks. (20:86) Further, they resent being told what strategy their military forces should use. According to Marshal of the Soviet Union, Sergie Sokolov, "The Soviet Union would pick the modes of action that best meets the interests of its defense capability, and not those which the people in Washington might

urge it to take....Our measures will be commensurate with the threat that may be created for the Soviet Union and its allies."
(9:54)

Chapter 3

SOVIET MILITARY THOUGHT

Dr Colin Gray, a defense analyst, believes analyzing Soviet responses to SDI must be done from a Soviet perspective. (6:xii) He warns that often explanations concerning Soviet responses are made from an American perspective. As a result, we don't appreciate or understand the Soviet responses to SDI. This chapter provides information that can be used as a basis for understanding the Soviet behavior toward SDI. There are two sections in this chapter. The first section discusses the major themes of Soviet military thought. The second section looks at the evolution of Soviet BMD.

KEY THEMES IN SOVIET MILITARY THOUGHT

There are many opinions about the major elements of Soviet strategic doctrine. (8:147) While there is some variance in the terms and concepts, there are some recurring themes. A representative list of themes is provided by Benjamin S. Lambeth, a Rand defense analyst. He paraphrased five key themes of Soviet doctrine as: (1) the best deterrent is an effective war-fighting capability, (2) victory is possible, (3) it pays to strike first, (4) restraint is foolhardy, and (5) numbers matter. (8:147) These themes provide a basic description of the ideas contained in Soviet military thought. They provide additional background for assessing SDI's impact on Soviet military thought. The following paragraphs will describe these themes in more detail.

The Best Deterrent Is An Effective war-fighting Capability

The Soviets believe that deterrence rests on the capabilities of the Soviet forces and not the rationality and good will of the enemy. (8:148; 17:56) Once the fighting begins, they believe warfare will escalate to nuclear war. (8:147) As such, Soviet doctrine is concerned about responding effectively and surviving a nuclear war. (10:41; 8:148; 2:67; 17:56) As a means of insuring survivability, the Soviets have had continual interest in defensive strategy and integrating it in their war-fighting capability. (17:56) This interest has been manifested in their work in the following areas: ballistic missile defense, air defense, civil defense, and anti-submarine warfare. (10:39) Since 1972, the Soviets have maintained a steady R&D effort in ABM technologies. This effort has included: (1) upgrading the

existing ABM around Moscow, (2) developing modular ABM components based on the Moscow ABM design, (3) constructing a radar site at Krasnoyarsk that appears to violate Article VI.b of the 1972 ABM Treaty, (4) developing the SA-X-12 mobile surface to air missile, and (5) conducting research on directed energy weapons. (5:18-21; 2:94) Meyer, a defense analyst, summarizes the relationship of offense and defense in Soviet military thought:

...strategic defense is inexorably linked to the strategic offense in Soviet thinking. Every authoritative Soviet discussion of military strategy -in both their open and closed literature- makes it clear that strategic defense in and of itself cannot be the basis of national military policy. Its value is to protect forces and war-making potential while buying time to switch to the offense. The Soviet perspective can be summarized as: "...never again by surprise, never again on our territory..." (19:285)

In summary, the Soviets believe a war-fighting strategy must simultaneously pursue the aims of defeating and destroying the enemy while assuring the survival of the Soviet Union as a viable political and military state. They have integrated their offensive and defensive strategies into a single war-fighting strategy.

Victory Is Possible

Victory is possible means the Soviet armed forces plan to fight and win wars instead of reaching a stalemate. The Soviets believe the synergistic effect from combining their strategic-offensive forces and strategic-defensive forces and civil defense forces will achieve victory for their nation. (17:62) Since the Soviets believe a nuclear war is possible and survivable, the Soviets reason that their military has three basic functions: (1) to restrain US foreign policy and US forces from protecting its vital interests, (2) to fight and win a war if it should occur, and (3) to ensure the survivability of Soviet Union as a dominant force. (4:iii) Lord Chalfont, a British defense analyst, made a definitive statement summarizing this theme, "A study of the most authoritative strategic writings from the Soviet Union -that of Sokolowsky, Ivanov, Gorshkov, and Kulikov among others- indicates that the concept of fighting and winning a nuclear war is at the heart of Russian military doctrine." (2:52)

It Pays To Strike First

The principles of war most often cited in Soviet military thought include: surprise, initiative, mass, shock, and momentum. (8:149) These principles are satisfied by a first-strike strategy. While the Soviets have never stated their intent to achieve or execute a first-strike capability, this capability would satisfy the principles of war that dominate their military

thought. Deane indicates that Soviets could prefer a first-strike strategy in order to minimize the impact of a retaliatory strike or first-strike. (4:19) By striking first, the Soviets believe the enemy will be operating from a degraded and reactive mode and surrounded by chaos. (8:149) The strategic rocket forces support these principles in the strategic nuclear spectrum. ICBM's can be launched without warning, and they provide massive destructive capability.

Restraint Is Foolhardy

The Soviets believe restraint in war could cause a loss of the initiative or prevent a decisive victory. The Soviets want to apply overwhelming forces for a quick, decisive victory. (6:70) Once the war has begun, their strategy is to defeat the enemy in the shortest time. (8:150) Soviet targeting for its ballistic missile forces has two general objectives: (1) to attain greatest possible destruction of enemy military forces, especially nuclear forces, and (2) to destroy selected key political and economic targets which inhibit the enemy's ability to sustain the war effort and overcomes his will to resist. (4:18)

Numbers Matter

According to Baxter, one of the most important Soviet principles of war is military preparedness. As such, the Soviets believe in having strong military forces in being. (1:23) Gray aptly described this point when saying, "From the Soviet perspective, one cannot be too strong militarily." (6:74) Lamberth doesn't think the Soviets have an obsession with numeric superiority, but he does point out that superiority does provide Soviet political leaders, in peacetime, more freedom to act in a given crisis. In wartime, numeric superiority does provide a cushion of reserve forces. (32:150)

EVOLUTION OF SOVIET THOUGHTS ON BMD

Gray aptly summarized the Soviet perspective on arms race issues. If it is good for the Soviets, it doesn't escalate the arms race. However, if it's good for the US, then it does escalate the arms race. (3:85) An example of this concept is the evolution of the Soviet position on BMD. Examining this issue shows how the Soviet policy was influenced by military, technical, and economic factors. Some parallels can be drawn from the 1972 period to today's arms control negotiations, which reveal similar influences and gives more insight into the Soviet response to SDI. The next few paragraphs briefly discusses this evolution.

Early Soviet Thought On BMD

The Soviets have been interested in BMD for a long time. The Soviets began work on BMD in the late 1940's and early 1950's. In 1962 Krushchev claimed the Soviet Union could hit a fly in space with its ABM system. (15:258) An initial deployment of an ABM missile called the Griffon system began in 1962 near Leningrad. This was followed by the Galosh system in 1964. (4:27) A major article which defined the official Soviet position of BMD was written in 1964 by retired General Major Talenskiy. (4:28) Talenskiy believed, "only that side which considers using its means of attack for aggressive purposes is interested in inhibiting the creation and improvement of anti-ballistic missile defense systems. For a peace-loving state, anti-ballistic missile systems are only a means of strengthening its security." (4:31) In 1967, the Soviet premier, Aleksei Kosygin, stated an ABM system wouldn't exacerbate the arms race, "I think that a defensive system which prevents attack is not a cause of the arms race....Perhaps an anti-missile system is more expensive than an offensive system; but its purpose is not to kill people but to save human lives". (15:258) Deane concludes that during the pre-ABM Treaty period the Soviets rejected the idea that ABM was a destabilizing tool and any curtailment of ABM could occur only with deep cuts in offensive weapons. (4:40)

The 1972 ABM Treaty

There are several reasons that may explain the Soviet's shift in position concerning BMD. First, during the time period of the late 1960's or early 1970's, the Soviets had achieved a rough strategic nuclear parity with the US. (5:15) One of their major concerns was avoidance of a nuclear war by miscalculation and a third-party instigator. (5:15) Second, the Soviets appeared to have encountered significant technical problems with their BMD research. (5:14) Some people thought the Soviet ABM system was inferior to the US system and the Soviets were trying to prevent further development of a superior system. (17:59; 3:88) Third, the US ABM development program had received congressional approval and the R&D efforts appeared to be making progress. Drell believed that the Soviets feared an unconstrained arms race to develop an Anti-Ballistic missile (ABM) system. The Soviets were fearful the US technological capability would succeed while the Soviet's would languish. (17:59)

Post-1972 Soviet Thought On BMD

As indicated in Chapter 2, the Soviets state SDI violates the 1972 ABM Treaty, and it must be a part of any future arms control negotiations. However, nothing has been said by the Soviets about

their BMD research programs. There is evidence that the Soviets have maintained a steady R&D program in this area. (17:59; 24:--)

This chapter provided a brief discussion about key themes of Soviet Military Thought, and a brief look at the evolution of Soviet thoughts on BMD. This information provides a backdrop for reading the expert opinions concerning the Soviet response to SDI contained in the next chapter

Chapter 4

WHAT THE EXPERTS SAY

A valuable source of information that will assist this analysis of the Soviet response is a review of the current literature on SDI. There is a significant amount of material written about SDI, but most of the literature deals with the technical feasibility or the strategic stability issues of SDI. However, several authors, Gray, Meyer, and Rivkin wrote articles specifically on the Soviet response because they felt it was an important, but neglected subject. The Meyer and Gray articles attempt to explain the Soviet response from a Soviet perspective. Information presented in this chapter completes the development of the background information that forms the basis for analyzing the Soviet response. This chapter will look at the following topics: Soviet concerns, likely Soviet responses, and impact on the Soviet defense program.

SOVIET CONCERNS

The literature indicates the Soviets have a genuine concern about the deployment of SDI. Much of the Soviet concern is based on their belief that the US will be able to develop an effective BMD and this system could be used to neutralize the Soviet strategic forces when they are used for either pre-emptive strikes or retaliatory strikes. Meyer thinks the Soviets believe the US has the technological ability to achieve their goals, "For the Soviet leadership, post-war experience is clear, the technical and economic resources of the US when harnessed by governmental calls for action, can turn what seems like science fiction into technological fact." (19:273)

Rivkin says they envision a US development of an effective defensive capability plus a newly modernized offensive capability as a clear nuclear superiority which is unacceptable. (20:86) Similarly, Meyer states that the Soviet leaders think SDI is much more than a defensive shield. (19:290) He states that the Soviets view SDI as a part of an offensive strategic modernization program whose goal is to attain a pre-emptive first strike nuclear delivery. (19:277)

Holloway states that, "The Soviets leaders apparently feared that even if these programs did not enable the US to escape from the threat of retaliation, they might nonetheless give it a

pre-emptive superiority, aimed at reducing the effectiveness of a Soviet retaliatory strike." (15:266)

LIKELY FUTURE SOVIET RESPONSES

There are a variety of opinions on this subject. These opinions range from the Soviets doing nothing, to a full Soviet effort to deploy an SDI system first. There are also various opinions concerning the time-phasing of the Soviet response. Rivkin makes an important observation concerning any Soviet response. He believes the manner in which we conduct our decision-making process will influence what the Soviet response to SDI will be in the future. (20:102) This is an important point because our future decision-makers must understand and consider this while making their decision concerning SDI deployment. The following paragraphs describe some Soviet responses discussed in the literature. For the purposes of this research, the author has grouped the likely future responses into two categories, political and military.

Political Responses

Kass and Burger believe that there will probably be a combination of a military and political response from the Soviets. They and others believe the Soviets are currently trying to negotiate away the SDI program. (17:61; 20:97; 14:16) They describe this option as, "Using arms control and political pressure as a means to forestall US military progress, trading off, if necessary, an inferior Soviet system as in the Galosh-Safeguard bargain called the 1972 ABM Treaty, while reserving the right for continued R&D efforts." (17:61) A recent statement by the Soviet foreign minister supports this idea that the Soviets plan to continue research efforts. (25:10) Similarly, Holz and Meyer believe that from a political perspective, the Soviet main objective is to slow down the rate of technical development of SDI. (10:51; 19:290) Dr Gray expands on this idea by saying, "The Soviet Union will negotiate only an offensive-defensive package which: at a minimum, secures the net countermilitary effectiveness of its strategic forces, rigorously prohibits any testing essential to development of weapons for boost and post boost and early mid-course BMD, and requires a truly major diplomatic effort for new additional defensive deployments to be blessed with legality." (14:18) Arms Control negotiating represents a political response to SDI that has tremendous near-term potential according to Meyer. He believes, "...the Soviet arms-control agenda would try to prevent US system development and testing, allowing a more gradual level of investment to move Soviet military technology in the SDI direction while continuing to feed the traditional military industries." (19:290)

Also, Kass and Burger believe the Soviets will not abrogate the ABM Treaty of 1972 and provide two reasons to support this position. First, the Soviet rhetoric has hailed the ABM Treaty as a critical component to world peace. Second, this allows the Soviet defense research to continue without looking like an aggressive nation. (17:61)

Politically, a provocative response is suggested by Dr Gray. He thinks the Soviets may view SDI as a one president excursion in American policy. (3:81) As a result, the Soviets may take a wait and see attitude. Recent history provides examples that justify this approach. A specific example is the US unilateral decision to close down the only American ABM site at Grand Forks AFB. Recent congressional budget cuts in SDI provide additional optimism for the Soviets that SDI may be a one-president initiative. (3:82)

Military Responses

Jack Caravelli, a Soviet defense analyst, provides a good framework for presenting Soviet countermeasures to SDI. He divides the countermeasures into four general categories: (1) ways to maintain ICBM effectiveness, (2) defense suppression, (3) defense avoidance, and (4) a Soviet version of SDI. (12:46) The following is a list of some countermeasures found in the literature:

Ways To Maintain Effectiveness Of ICBM Forces

- o Use mobile silos (12:46)
- o Harden fixed silos (10:46)
- o Use decoy boosters (12:46)
- o Laser shielding (12:46; 10:46; 18:70)
- o Use shorter boost time (12:46; 19:275; 15:269)
- o Penetration aids (12:46)
- o Spinning boosters (19:275; 18:70)
- o Increase number of real missiles (15:269; 18:67)
- o More RV's on a booster (15:270)

Defense Suppression

- o ASAT against space based elements (12:46; 17:61; 15:271; 10:46)
- o Space mines (19:275; 18:67)
- o Directed-energy weapons (15:263; 18:67)
- o Manned Soviet space station Salyut N (19:269)

Defense Avoidance

- o Deployment of cruise missiles (12:47; 19:288; 15:269; 18:67)
- o Modernization of strategic bombers (12:47; 18:67; 19:288; 15:269)

- o Reliance on conventional forces (18:67)

Soviet Ballistic Missile System

- o Enhance current ABM system (12:47; 17:61; 15:262)
- o Unspecified R&D acceleration (19:275; 15:273)
- o Upgrade tracking, target acquisition, surveillance radars, and battle damage systems (17:61)
- o ABM Treaty breakout to an area defense (17:61; 15:273)

This list is not intended to be complete or final, but it does represent what many scholars and diplomats have discussed. Some of the countermeasures are quick and inexpensive to implement while others are more difficult and costly to achieve. As the SDI system evolves, these countermeasures will change as well. In this regard, some serious questions about Soviet military countermeasures must be answered in the future. For example, "Are any of the Soviet countermeasures potentially unacceptable to the United States?" More specifically, "Would a Soviet shift to strategic bombers and cruise missiles be tolerable?" Another fundamental question is "Will Soviet countermeasures make SDI cost ineffective?" These are just some of the questions that need to be answered.

IMPACT ON SOVIET DEFENSE PROGRAMS

Many discussions which talk about the militarization of space focus on the US SDI. However, there is evidence that the Soviets have been working on similar concepts for quite some time. (19:285; 17:59; 21:42; 23:22) This is mentioned because it may be erroneous to state the Soviets are developing their BMD system in response to our SDI program. (2:94) Albert Weeks claims that Soviet R&D in the area of space weaponry has been increasing. He cites DoD's Soviet Military Power for 1984 as a source for this assertion. (23:27) Soviet rhetoric doesn't talk about their BMD work conducted prior to March 1983. The Soviet's would like the world to think that the Soviets BMD is a direct result of the SDI program.

Chapter 5

ANALYSIS AND CONCLUSIONS

Based on the information provided in the preceding chapters, it should be obvious that the Soviet Union's objective is to prevent the US from deploying an SDI system. (14:16) This response should not surprise anyone. The more interesting question is, "Why have the Soviets been so vigorous in attempting to stop the SDI program?" Dr Gray believes there is a genuine anxiety behind much of the propaganda generated by the Soviets. (14:13) This chapter identifies factors that may influence the Soviet response to SDI. For convenience, these factors have been collected into three groups: military, political, and economic. The following paragraphs describe these factors.

MILITARY FACTORS INFLUENCING THEIR RESPONSE

Since the SDI program has a significant impact on the Soviet military establishment, military factors have an important influence on the Soviet response to SDI. SDI deployment would impact both the offensive and defensive aspects of Soviet military thought. From an offensive perspective, several principles of war that dominate Soviet military thought are affected. First, SDI's early warning detection capability would reduce the element of surprise by providing more time to decide what action to respond with in the event of a missile attack. As a result, SDI would make a Soviet pre-emptive strike more difficult to accomplish. (20:94) Second, the massive destructiveness of their ICBM force would be reduced by an undetermined percentage because of SDI's capabilities. More importantly from the Soviet perspective, SDI provides the confidence and boldness for the US to initiate a pre-emptive first strike with impunity. (14:19)

SDI deployment impacts their defensive capabilities because more of our ICBM's would be protected and subsequently be available for a retaliatory launch. The Soviet defensive capabilities would be severely strained due to the increased number of retaliatory weapons launched. As a result, SDI would put the survivability of the Soviet Union as a viable nation at risk. Conversely, SDI's ability to preserve our national economic and political assets would make our nation more survivable and allow us to engage in a protracted war. This would undermine the Soviet strategy of a quick and decisive war.

POLITICAL FACTORS INFLUENCING THEIR RESPONSE

The Soviet Union's worldwide status as a superpower and its political influence is based on its military strength. (14:16-9; 19:275) A reduction in its military strength could reduce their sphere of influence. (14:19) Similarly, another US technological breakthrough would tarnish the image and prestige of the Soviet Union. The Soviets respect the US technological capabilities. The Soviet Union watched President Kennedy call for a national commitment to place a man on the moon before 1970. At the start, the Soviets enjoyed a 5-10 year lead over the United States. However, the Soviets were eventually overtaken and the manned lunar objective was achieved ahead of schedule. (19:275)

From a different political perspective, the Soviets see the SDI issue as another opportunity to erode the cohesion of the NATO alliance. (14:16; 7:87; 2:104; 17:16) Much of their statements are aimed at Europe specifically for this purpose. How strong a wedge the Soviets have with SDI for dividing European Allies is subject to great debate. Some people believe that the European public and some of their senior government officials would be willing to sacrifice SDI to save arms control. (3:78) A basic concern of the Europeans is that the strategic balance may become destabilized. (3:79) As a near-term response, the Soviets have played up to the fear and uncertainty of the Europeans and have nurtured its growth. (9:38)

In a broader context, the Soviet linkage of SDI and arms control is an attempt to enhance the peace-loving image of the Soviet Union to the entire world. (17:61) The dramatic events of Iceland in October of 1986 demonstrate this objective. With the whole world watching, the Soviet Union and the United States were at the brink of a major strategic arms reduction. However, according to the Soviets the chance for a more peaceful and secure world were dashed because of the US refusal to stop the SDI program. (22:21; 11:20)

ECONOMIC FACTORS INFLUENCING THEIR RESPONSE

When Gorbachev assumed power, one of his highest priorities, according to Sovietologists, was economic recovery. (16:39; 13:56) SDI could clearly impede progress toward that goal. In his book, The Grand Strategy of the Soviet Union, Luttwak portrays a very bleak outlook for the Soviet economy. The book was written prior to President Reagan's SDI speech in March of 1983, and yet it still provides some key insights into the potential economic influences shaping the Soviets response to SDI. He states that the Soviet military budgets have been maintained at the expense of the domestic economy. This has been an influence preventing the improvement in productivity of the Soviet economy. As a result he believes the Soviets could not sustain a protracted war. (7:52) This opinion may represent another reason for the Soviets depending on a short and decisive war. More importantly to SDI,

Luttwak and others think the Soviet economy couldn't accept the drain of a crash R&D effort to emulate SDI. (7:69; 19:276) Meyer points out that Soviet military economy is based on evolutionary design. Gray illustrates this concept by describing the Soviet defense industry as preferring to make relatively low-risk incremental improvement to existing products instead of undertaking high-risk new and innovative development programs. (6:77) Meyer believes engaging in a crash R&D effort would require a revolutionary design approach and switching to such an approach would further strain their economy. (19:277) As a result, he believes the Soviets probably wouldn't want to initiate a crash SDI-type program. (19:275) A Rand report published in 1986 echoes this idea. (26:29)

CONCLUSIONS

Clearly, the Soviets are genuinely concerned about the SDI program, and they will try to stop its deployment or neutralize its effectiveness. The vigor and emotion of the Soviet's response is a result of SDI's impact on Soviet strategic nuclear strategy. SDI threatens to neutralize the primary source of Soviet military and political power, the ICBM. Additionally, the Soviets fear the US will launch a nuclear first strike and use SDI as a shield to protect against a Soviet retaliatory strike. These thoughts may be a reflection of how they would employ a Ballistic Missile Defense system. The current Soviet Strategic Defense Program further illustrates their regard for such a capability. Thus far, the Soviet response to SDI has manifested itself in political areas. Previous political successes in negotiations, particularly the 1972 ABM Treaty, may motivate the Soviets to try the arms control negotiation approach again. This doesn't imply no military response will be taken, but because of the potential economic strain of a concentrated R&D effort, no additional military development efforts are likely for the next two years. The Soviet leadership really does not want to engage in an expensive arms race if political alternatives are available to stop SDI. This approach would allow the Soviet government to devote more attention to improving their weak economy.

For the present, the US will probably see an integrated political and military response to SDI. From a political perspective, the Soviets will continue to apply diplomatic pressure to force a curtailment or termination of the SDI program. It is an inexpensive approach, and it has worked in the past. The third five-year review of the 1972 ABM Treaty scheduled for 1987, provides an open forum for the Soviets to achieve this goal.

From a military perspective, they will continue work on their strategic defense programs. No new R&D efforts are likely. Instead, the Soviets may decide to wait until after the 1988 elections and determine if SDI becomes a one-president initiative. If the Soviets believe deployment of some version of SDI is inevitable, efforts for quick and inexpensive military

countermeasures will be taken along with an acceleration of selected strategic defense programs.

The Soviet response to SDI will continue to be influenced by military, political, and economic factors described earlier in this chapter. These factors are interdependent and their relative influence will change over time. They are important because they can be used as a beginning for assessing future Soviet responses to SDI. As Fletcher, Rivkin, and Gray have indicated, the Soviet response to SDI should be used as a criterion by the US national leadership when deciding the fate of the SDI program.

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